



PATENT  
P56909

**WHAT IS CLAIMED IS:**

1. A plasma display panel, comprising:

a front substrate and a rear substrate opposing one another with a predetermined gap therebetween;

a plurality of display electrodes formed on the front substrate;

a dielectric layer formed on the front substrate covering the display electrodes;

a plurality of first barrier ribs and a plurality of second barrier ribs formed on the rear substrate essentially perpendicular to each other forming an array of discharge cells, each discharge cell being completely surrounded by said first and said second barrier ribs;

a plurality of phosphor layers formed in the discharge cells; and

a plurality of electrically conductive address electrodes being formed orthogonal to the display electrodes in the discharge cells, said address electrodes being parallel to said first barrier ribs.

2. The plasma display panel of claim 1, the address electrodes being coated with a dielectric material.

3. The plasma display panel of claim 1, further comprising fixing grooves formed in edges of the rear substrate at areas corresponding to terminal areas of each of the address electrodes, the fixing grooves securing the terminal ends of the address electrodes.

1           4. The plasma display panel of claim 3, wherein the terminal areas of the address electrodes  
2 positioned in the fixing grooves are further secured by an adhesive member.

1           5. The plasma display panel of claim 1, wherein a height  $t_2$  of the second barrier ribs is less  
2 than a height  $t_1$  of the first barrier ribs.

1           6. The plasma display panel of claim 2, wherein a phosphor layer is further coated on an outer  
2 circumference of the dielectric material coating the address electrodes.

1           7. The plasma display panel of claim 1, wherein the conductive wires forming the address  
2 electrodes are circular in cross section.

1           8. The plasma display panel of claim 1, wherein the conductive wires forming the address  
2 electrodes are polygonal in cross section.

1           9. The plasma display panel of claim 1, wherein the discharge cells defined by the first barrier  
2 ribs and the second barrier ribs have a polygonal shape when viewed from a direction of the front  
3 substrate.

1           10. The plasma display panel of claim 1, wherein the discharge cells defined by the first

2 barrier ribs and the second barrier ribs, have a circular shape when viewed from a direction of the  
3 front substrate.

1 11. The plasma display panel of claim 1, wherein the discharge cells defined by the first  
2 barrier ribs and the second barrier ribs, are rectangular and staggered to discharge cells on an  
3 opposite side of a first barrier rib.

1 12. A plasma display panel, comprising:

2 a front substrate and a rear substrate opposing one another with a predetermined gap  
3 therebetween;

4 a plurality of display electrodes formed on the front substrate;

5 a dielectric layer formed on the front substrate covering the display electrodes;

6 a plurality of barrier ribs formed on the rear substrate and comprising a plurality of first  
7 barrier rib members formed in a direction orthogonal to the display electrodes, and a plurality of  
8 second barrier rib members formed in a direction parallel to the display electrodes, the first barrier  
9 rib members intersecting the second barrier rib members, the plurality of barrier ribs forming an  
10 array of discharge cells, each discharge cell being bounded by a pair of first barrier rib members and  
11 a pair of second barrier rib members;

12 a phosphor layer being formed in respective discharge cells; and

13 address electrodes comprising conductive wires and coated with a dielectric material, the  
14 address electrodes being mounted on the second barrier rib members, the address electrodes being

15 orthogonal to the display electrodes.

1 13. The plasma display panel of claim 12, wherein grooves are formed in distal ends of the  
2 second barrier rib members into which the address electrodes are inserted.

1 14. The plasma display panel of claim 12, wherein a height  $t_2$  of the second barrier rib  
2 members are less than a height  $t_1$  of the first barrier rib members.

1 15. The plasma display panel of claim 12, further comprising fixing grooves formed in edges  
2 of the rear substrate at areas corresponding to terminal areas of each of the address electrodes, the  
3 fixing grooves securing the terminal areas of the address electrodes.

1 16. The plasma display panel of claim 15, wherein the terminal areas of the address  
2 electrodes positioned in the fixing grooves are further secured by an adhesive member.

1 17. The plasma display panel of claim 12, wherein a phosphor layer is coated on an outer  
2 circumference of the dielectric material coating the address electrodes.

1 18. The plasma display panel of claim 12, wherein the conductive wires forming the address  
2 electrodes are circular in cross section.

1           19. The plasma display panel of claim 12, wherein the conductive wires forming the address  
2 electrodes are polygonal in cross section.

1           20. The plasma display panel of claim 1, wherein the address electrodes are realized through  
2 electrically conductive wires.